

## **ABSTRACT OF THE DISCLOSURE**

Various embodiments of systems and methods for performing accumulation operations on block operands are disclosed. In one embodiment, an apparatus may  
5 include a memory, a functional unit that performs an operation on block operands, and a cache accumulator. The cache accumulator is configured to provide a block operand to the functional unit and to store the block result generated by the functional unit. The cache accumulator is configured to provide the block operand to the functional unit in response to an instruction that uses an address in the memory to identify the block  
10 operand. Thus, the cache accumulator behaves as both a cache and an accumulator.

FOIA b 5 - DECLASSIFIED